UNITED STATES DEPARTMENT OF COMMERCE United States Patent and Trademark Office Address: COMMISSIONER FOR PATENTS P.O. Box 1450 Alexandria, Virginia 22313-1450 www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/656,613	09/04/2003	Joseph H. Johnson	2867-661	7994
	7590 03/15/201 TERRANOVA, P.L.L.		EXAM	IINER
100 REGENCY FOREST DRIVE			QUINTO, KEVIN V	
SUITE 160 CARY, NC 275	518		ART UNIT	PAPER NUMBER
			2826	
			MAIL DATE	DELIVERY MODE
			03/15/2011	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

	Application No.	Applicant(s)	
	10/656,613	JOHNSON ET AL.	
Office Action Summary	Examiner	Art Unit	
	Kevin Quinto	2826	
The MAILING DATE of this communication ap Period for Reply	pears on the cover sheet v	rith the correspondence address	•
A SHORTENED STATUTORY PERIOD FOR REPL WHICHEVER IS LONGER, FROM THE MAILING D - Extensions of time may be available under the provisions of 37 CFR 1. after SIX (6) MONTHS from the mailing date of this communication. - If NO period for reply is specified above, the maximum statutory period - Failure to reply within the set or extended period for reply will, by statute Any reply received by the Office later than three months after the mailin earned patent term adjustment. See 37 CFR 1.704(b).	ATE OF THIS COMMUN 136(a). In no event, however, may a will apply and will expire SIX (6) MO e, cause the application to become A	CATION. reply be timely filed NTHS from the mailing date of this communicati BANDONED (35 U.S.C. § 133).	
Status			
1) ☐ Responsive to communication(s) filed on 03 M 2a) ☐ This action is FINAL . 2b) ☐ This 3) ☐ Since this application is in condition for alloware closed in accordance with the practice under M	s action is non-final. Ince except for formal ma	·	is
Disposition of Claims			
4) ✓ Claim(s) 9-12,14,15,17-19,32,33 and 42-50 is 4a) Of the above claim(s) is/are withdra 5) ✓ Claim(s) 15,17-19,32,33 and 46-50 is/are allow 6) ✓ Claim(s) 9-12,14 and 42-45 is/are rejected. 7) ☐ Claim(s) is/are objected to. 8) ☐ Claim(s) are subject to restriction and/o	wn from consideration. wed. or election requirement.	ation.	
9) The specification is objected to by the Examine 10) The drawing(s) filed on is/are: a) accomposed and applicant may not request that any objection to the Replacement drawing sheet(s) including the correct to by the Example 2.	cepted or b) objected to drawing(s) be held in abeya stion is required if the drawing	nce. See 37 CFR 1.85(a). g(s) is objected to. See 37 CFR 1.121	• •
Priority under 35 U.S.C. § 119			
12) Acknowledgment is made of a claim for foreign a) All b) Some * c) None of: 1. Certified copies of the priority document 2. Certified copies of the priority document 3. Copies of the certified copies of the priority document application from the International Bureat * See the attached detailed Office action for a list	ts have been received. ts have been received in a prity documents have been u (PCT Rule 17.2(a)).	Application No In received in this National Stage	
Attachment(s) 1) Notice of References Cited (PTO-892)	4) ☐ Interview	Summary (PTO-413)	
2) Notice of Draftsperson's Patent Drawing Review (PTO-948) 3) Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date	Paper No	(s)/Mail Date Informal Patent Application	

Application/Control Number: 10/656,613 Page 2

Art Unit: 2826

DETAILED ACTION

Response to Amendment

1. The indicated allowability of claims 9-12, 14, and 42-45 is withdrawn in view of the new rejection under 35 U.S.C. 112, second paragraph.

Claim Rejections - 35 USC § 112

- 2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

 The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
- 3. Claims 9-12, 14, and 42-45 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
- 4. Claim 9 recites the limitation "said subsequent k-th layer" in line 5. There is insufficient antecedent basis for this limitation in the claim.
- 5. Claim 11 recites the limitation "said single crystal Silicon semiconductor material" in lines 4-5. There is insufficient antecedent basis for this limitation in the claim.
- 6. Claim 11 recites the limitation "said subsequent i-th layer" in line 17. There is insufficient antecedent basis for this limitation in the claim.
- 7. Claim 14 recites the limitation "said single crystal Silicon semiconductor material" in lines 4-5. There is insufficient antecedent basis for this limitation in the claim.
- 8. Claim 42 recites the limitation "said subsequent k-th layer" in line 11. There is insufficient antecedent basis for this limitation in the claim.

Art Unit: 2826

9. Claim 44 recites the limitation "said subsequent i-th layer" in line 12. There is insufficient antecedent basis for this limitation in the claim.

Allowable Subject Matter

- 10. Claims 15, 17-19, 32, 33, and 46-50 were allowed in a previous Office action.
- 11. The following is an examiner's statement of reasons for allowance: the allowable subject matter of claims 15, 17-19, 32, 33, and 46-50 was discussed in previous Office actions.
- 12. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kevin Quinto whose telephone number is (571) 272-1920. The examiner can normally be reached on M-F 8AM-5PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sue Purvis can be reached on (571) 272-1236. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for

Application/Control Number: 10/656,613 Page 4

Art Unit: 2826

published applications may be obtained from either Private PAIR or Public PAIR.

Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see http://pair-direct.uspto.gov. Should

you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a

USPTO Customer Service Representative or access to the automated information

system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Kevin Quinto/ Examiner, Art Unit 2826 /Minh-Loan T. Tran/ Primary Examiner Art Unit 2826